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The letter of the Executive Political Commission of the CD of the RCP addressed to Academician Klens Ganssenger, D.Sci. on her birthday is highly appreciative of her active role in the campaign for the development movement of her countrymen to the fight for the country's social and national liberation, for the revolutionary transformation of society and the building of the new destiny of socialist Romania.

Our whole party and people have a keen and unanimous appreciation of your activity as an outstanding and active militant in national scientific, to your decisive participation as a member of the Executive Political Committee of the Central Committee of the Romanian Communists Party, First Deputy Prime Minister and Chairwoman of the National Council of Science and Education — for the organization and carrying out of the nationwide plans for the organization and modernization of production for a higher productivity and economic efficiency, in the attainment of the tasks of the new revolution in science and technology and of the new economic revolution in the field of the national economy.

Based on the letter of the Executive Political Committee further reads:

The letter also highlights the active participation of Academician Klens Ganssenger, D.Sci. in scientific and technological fields.

Com. no. 2

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In their speeches, the personalities highlighted the personality of the prominent Romanian scientist, Academician Elena Ceaușescu, DSc, her remarkable contribution to developing the science and technology of polymers, to enriching the specialized literature, to settling certain problems of great economic interest on scientific bases.

Technology of Polymers. The work was released within a homages-paying event which took place in Vienne of the Austrian Cultural Centre in Polly Palace. Public like personalities, scientists, directors and representatives of firms and research and production institutes in the field of chemistry, representatives of the Technical University in Vienne, of the business elec-

The Executive Political Committee also underscores that the life and activity of the scholar-citizen and politician Elena Ceausescu enjoy worldwide ap-

Reference is made to the activity carried on by Academician Elena Gerasimova, D.Sc., in her capacity as chairwoman of the "Scientists and Peace" National Council for the strengthening of co-operation and collaboration with other organizations of scientists all over the world, in the struggle for secu-

cheerfully wishing her a long life, happiness, health and power of work, further successes in her actively devoted to the attainment of the goals set by the Thirteenth Congress and the National Conference of the KCP, in the building of the militantly developed socialist society and Romania's advance to communism.

In this vast and complex programme the functional link of all facets, and aspects related to the assembling of science in the Romanian economy and science, from education to research and design, to the economic results they produce, is ensured by an unique and coherent system centred around the National Council of Science and Technical Innovation headed by Academician Elena Ceauşescu, D.Sc., an irrefragable proof and state activist, a scientist of world repute, an outstanding personality of our days.

"In all branches of the national economy", Elenu Coșoveanu underlined in her speech at the plenary meeting, "research has to participate directly in the fulfilment of the provisions of the production plan in the best possible conditions, contributing to the good organization of the work, to the whole performance in fulfilling the plan for the ongoing year and for the whole five-year plan period". As a matter of fact the direct link between the activity of research and that of education and the short- and long-range tasks of the economic and social development has been the basic characteristic of its programme worked out by the chairwomen of the National Council of Science and Education.

PRODUCTION
UNDER THE
SIGN OF TECHNICAL AND
SCIENTIFIC PROGRESS

The economic dimension of the internal dynamism of the field. Because the cost of scientific creation falls within a decreasing perimeter at the social order, the economic dimension to which it is related, while being a consequence of the development level of the production mechanism of assuming science as a main development instrument.

The economic dimension of

Development primarily concerns the sphere of progress which we have termed the scientific and technical revolution, the socialist institutions of which are the basis for the creative, the inspiring work and turning to advantage the results of scientific research in technical activity.

We are witnessing a new technical-scientific revolution with deep and far-reaching implications for the production, in the technological sphere, of the means for the individual happiness, for the development of this exigency... In the development of the high-tech branches of science and technology, the role of the research and technological engineering activities and a large share of highly skilled work.

This strategic line laid down as early as the Ninth CPC Congress, had in view the priority development of the science and technical revolution, the development of the means of production, and, in the long run, of material production.

As a result of this strategy, the overall productivity of the machine and metal engineering industries grew 12.9 times, and the electrical engineering industries 15 times. This phenomenon is visible also in the other branches of the economy. The share in the overall value of the social product is, rather than decreasing, increasing. In the ongoing five-year period in the machine engineering industry a share (topping 10 per cent) of the overall value of the product to be held by new and updated products, which will have a considerable impact on the branches and equip the whole industry with modern technologies.

In order to get an accurate picture of this evolution we should stress the fact that the

At the modern line, according to the design, the dining table is made and upon to provide optimum conditions for the fast application of research. The slight differences in the two lines lead for that extremely fertile outlook in which elements of the design, the rates and the altitudes in a permanent confrontation with the requirements of a vast development strategy.

This year, Rumanian scientists

and on the national economy as a whole. Thus, the modernization of the national economy requires a radical phase and volume, in the other fields of activity.

AN EFFICIENT STRATEGY

Through its guidelines and priorities, the working programme of scientific research is a real contribution of the responsibility devolving on technological engineering and design in the general development of the economy and society.

Chairman of the National Council of Science and Technological Engineering

the important field in fulfilling the production tasks and the general interest laid down by the scientific and technical policy of the country. The main applicable character of the programme reinforces the relationship between fundamental and applied research as two inseparable elements of a single scientific development. It lays scientific bases of the entire Romanian economy. While noting the contributions made by Romanian scientific research, the Government has decided to

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The treaty that the Soviet Union and the United States of America signed on eliminating intermediate and shorter-range missiles is a historic event, an achievement of the realistic policy of the struggle of all peoples. While assessing it as a major step, we must say, however, that there still remain in the world huge nuclear arsenals that can destroy several times

les and peoples of the world to do their utmost for this new year to mark big strides on the path of disarmament, of peace of the negotiated settlement of the negotiated settlement of conflicts, of new democratic relations, set on the principles of fully equal rights, respect for the sovereignty and independence of each nation, non-interference in domestic affairs, complete repudiation of the threat and use of force.

In closing his address, the
dean of the diplomatic corps
addressed President Nicolae
Ceausescu and Elena Ceausescu.

worsened, more particularly the developing countries. We need a new international financial system. An end must be put to the financial and monetary fluctuations which in fact represents a certain policy aimed against the poorer countries; against the developing countries. Firmer measures are required as far as price stability is concerned. For a free inter-

We know that our and our country's achievements are a contribution to general development and in the cause of progress and peace, of disarmament and of what is often in-

The fact that science ever
is obviously appraised as a di-
rect production factor in Roman-
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ciently explained by a reference
to the internal dynamics of the
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Development primarily concerns the sphere of progress which we have termed the scientific and technical revolution, the socialist institutions capable of creating, of laying down the basis for, and turning to advantage the results of scientific research in technical activity.

We are witnessing a new technical-scientific revolution with deep-going implications for the production apparatus, in the technological apparatus, in the scientific apparatus, in the apparatus for the individual sciences, for the individual disciplines, for the individual professions, for the individual spheres of activity.

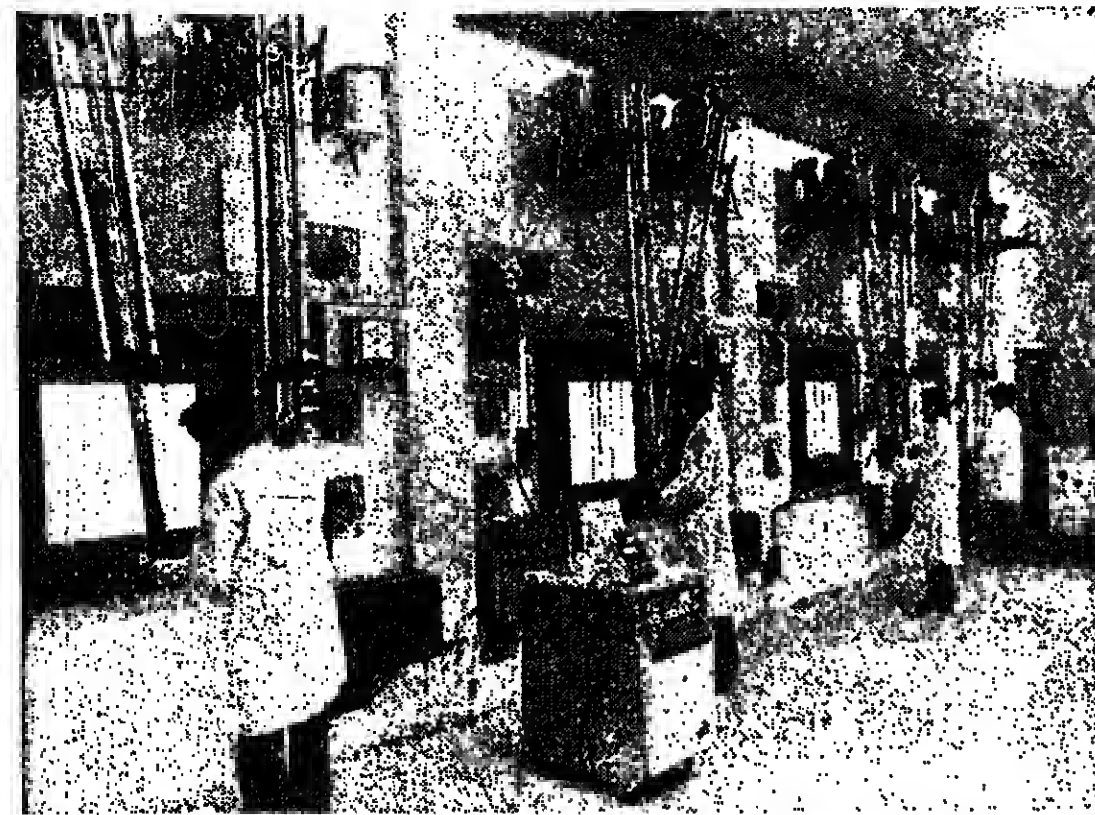
This scientific and technical revolution is the most important factor in the development of the high-tech branches of the national economy, the basis of the research and technological engineering activities and a large share of highly skilled work.

This strategic line laid down as early as the Ninth CPC Congress, had in view the priority development of the science and technical apparatus, the apparatus of chemistry, and, in the long run, of electrical engineering.

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Through its guidelines and objectives, the working programme of scientific research this year is a confirmation of the responsibility devolving on technological engineering and design in the general development of the economy and society, the Chairwoman of the National Council of Science

the important field in fulfilling the production tasks and the general interest laid down by the Government in the development of the applied character of the programme reinforces the relationship between fundamental and applied research as two inseparable elements of a single scientific development. It lays scientific bases of the entire Romanian economy. While noting the contributions made by Romanian scientific research, the Government has decided to



ADVANCED RESEARCHES

Romania has a national center of physics as part of which researchers are made in the field of using atomic energy for peaceful purposes. By means of cyclotrons, of apparatus giving particles high energy and other equipment, specialists study the mechanisms of nucleus interaction and structure, the process of nuclear fission. To this end they use X-ray and gamma ray detectors, detectors of charged particles, including heavy ions, ionization chambers, mass and charge identification systems, etc. Experimental data are introduced in computers on the basis of a complex software. From among the successes of the Romanian physicists noteworthy are the results secured in the study of the structure of nuclei. At the same time remarkable results have been obtained in the research of reaction mechanisms. Outstanding results are scored by the approach of other high-tech researches in the field of atomic processes, of the physics of heavy ions. At the same time developed were applied researches through the creation of nuclear filters for microelectronics, the photoacoustic and food industries.

Original methods have been worked out for determining the

content of hydrogen on the surface of metals, semiconductors or certain insulating materials, as well for identifying impurities in semiconductors. Various installations using the properties of gas and plasma discharges, various accelerators and betatrons for non-destructive control, medical therapy, etc. have been designed. Also devised were installations and technologies for the vacuum technique — electron beam welding, metal deposits, special alloys obtaining. The Romanian researchers have created nuclear electronics apparatus and dosimeters for nuclear electric stations. Together with German

experts from the Max Planck-Institut, Romanian physicists have created an up-dated postacceleration system for obtaining powerful energy. Fruitful scientific collaboration has also been conducted with institutes in the USSR, China, Yugoslavia, Czechoslovakia, East Germany, West Germany, France, the USA, Italy, and other countries. Romania hosts one of the few institutes of nuclear physics in the world. It also experts radioactive and stable isotopes, and develops isotopic technologies with broad applications in the economy, biology, medicine.

LUDOVIC ROMAN ■

HILL RECOVERY

The Romanian vine culture research has made possible the scientific classification of regions and the distribution of breeds according to the pedoclimatic peculiarities of each vineyard. During the last years, 18 new breeds and over 20 clones of vine have been created, being more resistant to cold, drought, diseases and pests. Wine growing technologies have been modernized, directing the vines on stems has been introduced, and

differentiated cutting systems have been established. Special attention was paid to setting up new plantations, especially on steep grounds, inadequate to other crops. The Ferici research station has specialized in elaborating and testing new technologies to hilly areas, on difficult grounds, with high gradients of slopes and various degrees of deterioration. The results of the research carried on here have been applied on the scale of an entire wine growing area in Vasil county. The Hugi experiment, as experts call it, has proved the possibility of getting rich grape crops in an area which seemed to be hard to manage in keeping with the requirements of modern viticultural technology. Today's vineyards, stretch on 2,000 ha. "Hugi" is related to the most famous wine growing centers of the country. The success at Hugi has stimulated the activity of wine growers in other counties including slopy, decayed grounds. Two successful vineyards have been set up at Mosna and Rădăușeni (Iasi county), in the pre-mountainous areas (Sibiu, Cluj, Alba county) etc. The research has revealed a very important point in agricultural practice, namely, that in numerous areas that have recently entered the "area" of this culture, vine can grow even unprotected or semi-protected.

FLEXIBLE CELL SYSTEMS

Last year, a flexible cell workshop was commissioned at the Ștefănești Enterprise. It is the fruit of collaboration of the specialists of the unit with those of the Târgu Jiu Institute of Scientific Research and Technological Engineering for Machine Tools, who worked out the project and part of the systems of automated supply for flexible cells. The new achievement is part of an ample action, coordinated to a large investment program, which has previously changed the face of the plant by modernizing the technological procedures and flows at the main works, starting with the "hot" sectors, up to the processing sectors and the assembly works.

The first plant was completed last year and now work is being done for a new technological stage. The flexible cells and the robot have started work. In the first place we can mention an aspect referring to robot setting the execution systems.

AUTOMATION

The automation of production processes, the computer-aided design, the programming of economic activities are constant concerns with Romanian researchers who have worked out numerous studies, syntheses and monographs brought out in the well-known series of the Bucharest Technical Publishing House The Library of Automates, Informatics, Electronics and Management. Of the latest releases we should mention Identificarea asistată de calculator a sistemelor (Computer-Assisted Identification of Systems) by Mihail Terțese, Petre Stolica and Theodor Popescu, a study laying stress on algorithms and the implementation on computers of questions related to industry, environment protection and other fields. The authors set forth original methods of identifying solutions, of analytically and experimentally modelling the processes under study. Another volume, Desigurarea suprafețelor asistată de calculator (Computer-Assisted Unfolding of Surfaces) signed by Iosif Marișescu, Aurelian Tăbărescu and Radu Constantinescu brings up interesting applications of the Romulus-side independent and Carol minicomputers, and at the DAF 2020 display. The work presents automation programmes for technical drawing and design activities in machine and metal engineering enterprises. Recently printed was also the study Finte and Border Elements with Applications in Machine Body Computing. The authors, M. Găfănuș, V.F. Potareș and N. Mihalache, note in the preface that the work is based on Romania's and other countries' experience in the realm of expanding sophisticated computing methods, especially that of elements and border finite.



THE ROMANIAN LASER

Laser physics is one of the most laborious domains of modern physics. Sprung out of the crossroads of numerous fronts and directions, laser technology has preserved and enlarged its interdisciplinary character lately. It is successfully applied in material processing, printing, medicine, telecommunications, optical processing of data, metrology, etc. Noteworthy is the fact that making an analogy between the first 25 years development of laser and the development of computers over the same period of time, statistics show that lasers have outrun computers as regards their selling in the world market.

AMONG THE BEST IN THE WORLD

Not long ago it was 25 years since the making of the first Romanian laser, I suggested to Dr. Vasile Brăgăreanu, head of the laser section at the Central Physical Institute (ICEFIZ) to tell us about Romanian lasers' evolution alongside the world development of the scientific and technology domain.

"There had hardly passed two years since the inauguration of the laser 'era', by the apparatus, in 1960, of the ruby laser

country produces carbon dioxide laser on a par with world trends, adapted for industrial use. Now, as well as in the near future, most demanded is the continuous wave carbon dioxide laser of 12 kW. Another system produced by us, equipped with computer-aided control, cuts materials with complex contours.

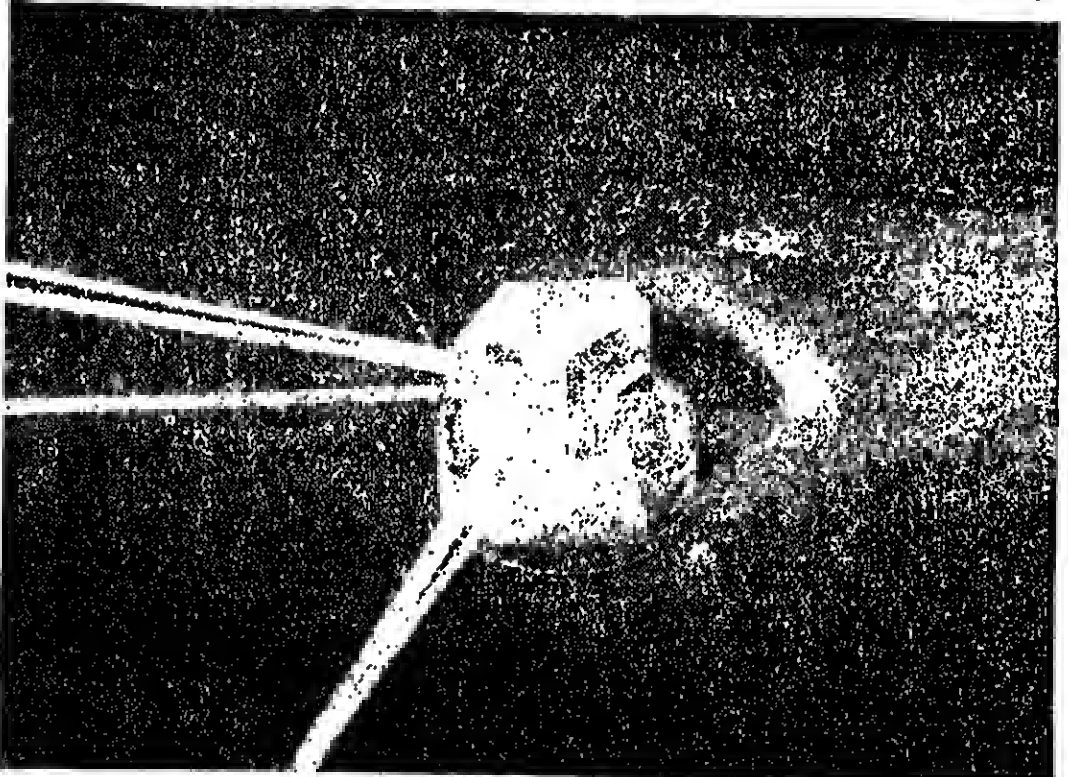
ONE STEP AHEAD OF WORLD EXIGENCIES

"The Romanian installation for the laser nitriding of steel and titanium, a new, highly ef-

ciency. They can be used for precision boring, microboring, thermal treatments and inscriptions.

"Also, the He-Ne laser interferometers built in Romania in various variants have parameters competitive on any market in the world.

"Laser measure and control installations currently equip the Romanian industry and agriculture thanks to their great accuracy, especially in contactless measurements. The laser measure and control apparatus also include optical-electric devices and microcomputers. They are used on a large scale in alignment, leveling, distance measurements (to km) with an accuracy of 1 cm), machine tool



ood, in 1961, of the He-Ne laser, when the collective of young researchers, led by Ion Agărbăntescu, then head of the optical methods in Atomic Physics Laboratory at the Atomic Physics Institute, made the first Romanian laser.

"I don't know exactly what place Romania holds as an owner of lasers, but we were one of the first. We owe this to the plan and enthusiasm of our researchers, as well as to the experimental techniques and theoretical knowledge they used.

"The switch of the activity of our laboratory to this new domain allowed, in a few years, the main types of lasers which had already appeared in the world, to be made here, while we tried to diversify, optimize and apply them to research and, especially, to the economy.

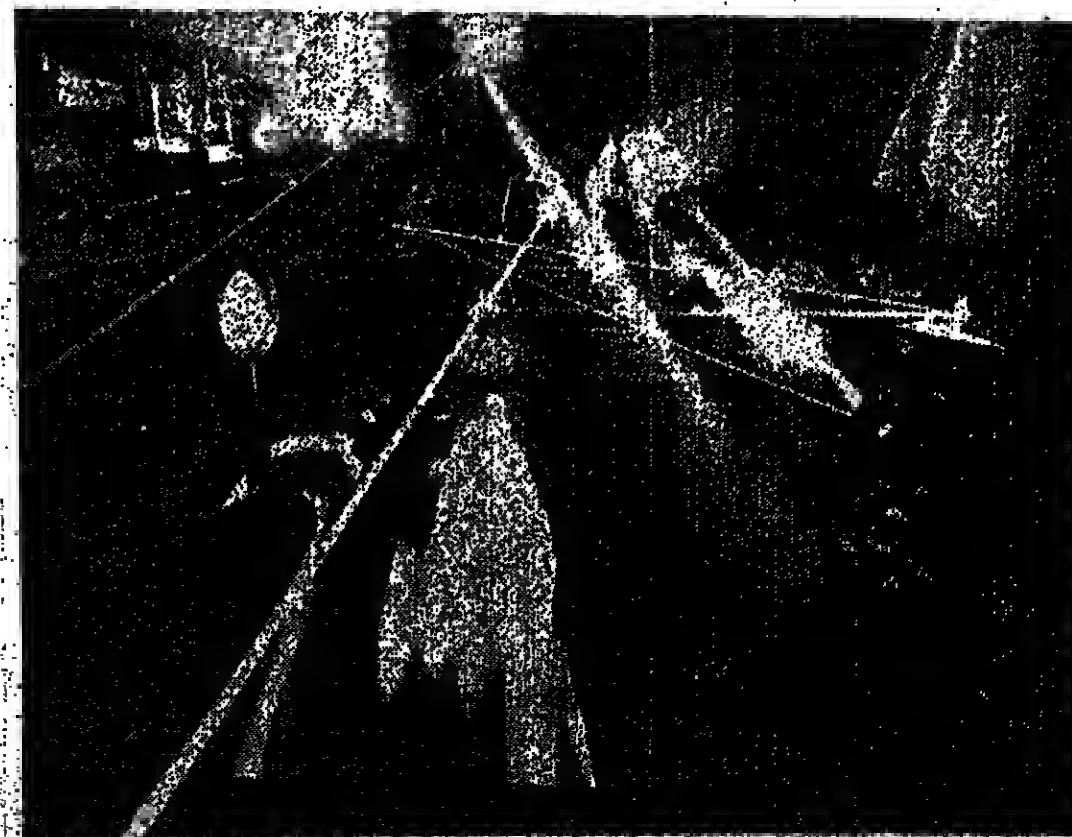
"At present, the laser activity in our country is carried on within the programme of scientific research and technological development of Lasers and Their Applications: Their Expansion in the Sectors of National Economy over 1988-1990. The strategy of this programme is meant to correlate the development of lasers in the whole world to the requirements of the national economy. As a matter of fact, a great number of activities are impossible to approach — according to the modern criteria of efficiency and quality — without making use of the means offered by the complex laser installations. A few examples: over 1981-1987 the heat treatment of materials has had the applications. The most widely used systems are carbon dioxide lasers in continuous wave with powers of several kilowatts. At present, our

laser technology for the hardening of metallic materials and the achievement of materials for the electronic industry is a world first, while the glass laser and the neodymium-doped, pulsed and continuous-wave YAG installations are on a par with the best world performance.

"Technological research and development of the laser mea-

tures with an accuracy of a tenth of a micron), speeds, spatial deformation, and others. These apparatus mainly use low-power lasers with frequency stability.

"Technological research and development of the laser mea-



THE LASER IN A NUTSHELL

When an atom moves from a higher energy level to a lower one, it emits spontaneously a quantity of light to a quantum of radiant energy called photon, carrier of the energy difference between the two levels. Unlike the spontaneous emission of light, the stimulated emission takes place when the atom is determined to fall from the higher level to the lower one following a collision with a photon. A spontaneous process of this kind produces an avalanche of identical photons. That is why a "pumping" mechanism is needed to keep the phenomenon going. Generally, this mechanism consists of two facing mirrors reflecting the photons and forcing them to cross several times the active material of the laser, causing a chain reaction of photons. One of the mirrors is slightly transparent, allowing the amplified radiation to issue under the form of a narrow, very intense beam. The main characteristics of laser light are: monochromaticity, unidirectionality, coherence and intensity. Of the criteria used for classifying lasers we should mention two: the emission regime (pulsed or continuous-wave) and the type of active material.

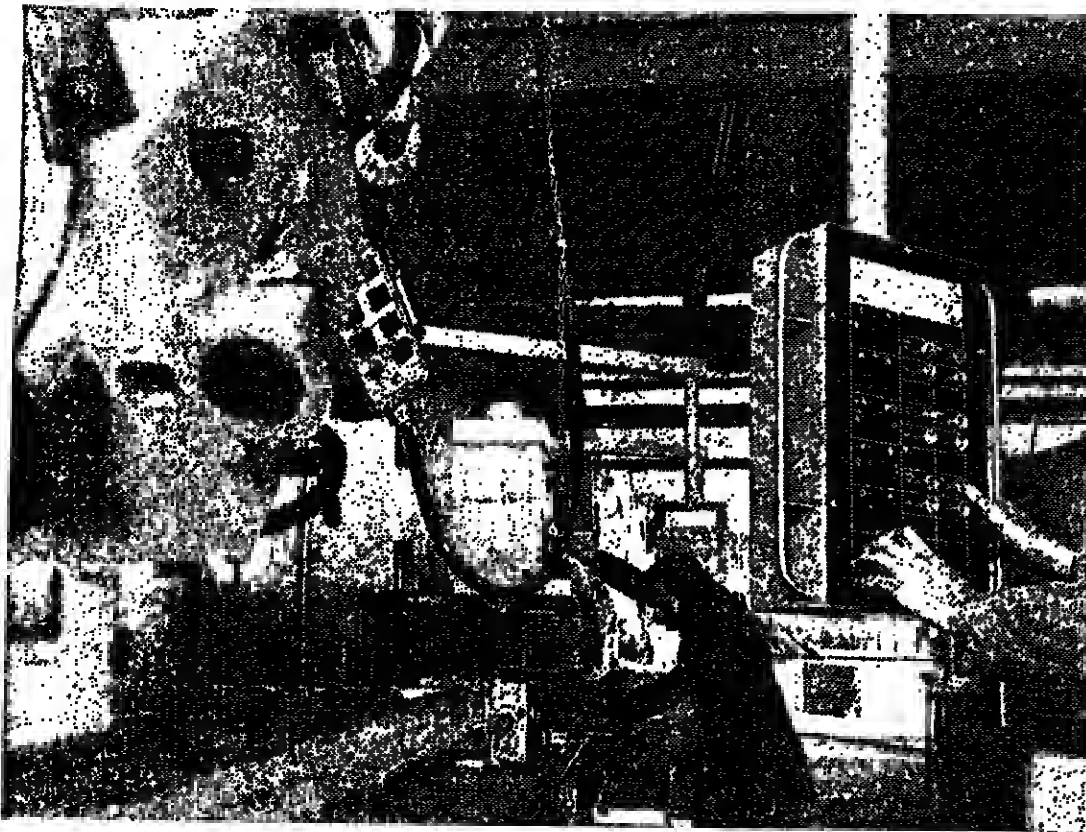
and control apparatus first of all answer the requirements of the national economy: drilling and coal mines, irrigation and control of irrigation and drainage ditches, industrial alignments, accurate measurements for fine mechanics and machine

tools, semiconductor plaques and optic fibres control, nondestructive control of parts, etc. At the same time, we closely follow international trends. Numerous systems can be employed to microcomputers, allowing of automation and the use of the whole measuring potential with the help of laser light. The use of laser sensors and of millimeter light systems with microcontrollers in the intelligent robots of the automated manufacturing flows is a certifying of the next decade's production.

"In the realm of chemistry we are concerned with obtaining laser drilling powder. We have already obtained substances with special properties through laser irradiation, and devised beam irradiation, both new installations, some of them world firsts. Jointly with experts from the Dogeti chemical enterprise, researches are conducted for preparing new substances and devising the required technological processes.

Some of our researches concerning substances apparatuses and isotopic enrichment: two are world firsts, being the fruit of collaboration with Soviet researchers and the Institute of Physics, Institute of Research headed by Alexander Arhangeliev. Researches are being carried out for the discovery of the laser. These researches are a wide range of laser made by its standing out among which the high-precision measurements are the carbon dioxide and neodymium-doped lasers.

THE SINGLE NATIONAL PLAN OF ROMANIA'S SOCIOECONOMIC DEVELOPMENT IN 1988



THE SIGNIFICANCE OF SOME PLAN INDICATORS

As we informed you in our last issue, at the end of last year the Grand National Assembly (Parliament) unanimously passed the Law on the Single National Plan of Romania's Socioeconomic Development for 1988. The participants in the debates highlighted President Nicolae Ceausescu's decisive role in working out and laying on scientific bases, in keeping with a unitary outlook, the lines of the country's socioeconomic development in 1988, in thinking out and applying the programmes of stressing the qualitative, intensive sides of production, improving the organization and modernization of production, perfecting economic-financial activity, increasing the efficiency of the entire social work.

The whole content of the plan reflects the orientation towards emphasizing the qualitative sides of economic growth, the course towards an intensive-type reproduction, the substantial increase of efficiency in all activity sectors. Noteworthy in this respect is the much higher growth rate of the national income - 9.0-10.0 per cent - compared to that of the social product, which will be 6.0-6.5 per cent. Such an increase in the national income will secure both the funds necessary for overall development and those earmarked for passing on to raising remuneration by some 10 per cent, while further promoting a firm policy of price and tariff stability.

INDUSTRIAL RATES

In 1988 industry will continue to represent the fundamental component of the policy of economic development in Romania. According to the plan, this year the value of goods production will increase by 7.0-8.0 per cent as compared to last year, so that of net production by 11.0-12.0 per cent.

The plan lays special stress on expanding the base of raw materials, improving manufacturing structures in the processing industry by giving priority to the growth of high-tech branches.

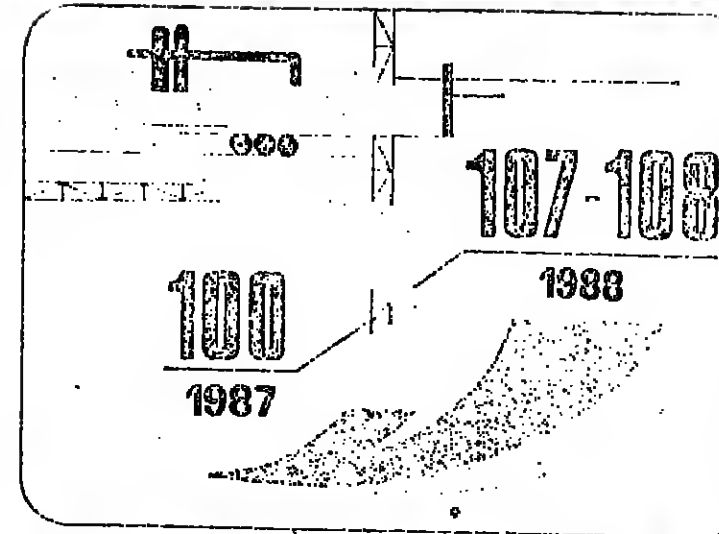
Special tasks are assigned concerning the growth of the production of the extractive and power industry, especially with oil, pitcoal, lignite, non-ferrous ores and coal-based electric energy. For metallurgy and machine engineering the plan stipulates the increment of the share of highly processed products, the intensification of the process of redesigning and upgrading, the replacement of alloy and high-alloy steels, the improvement of performance and reliability of products, the intensification of research and development, the intensification of the fulfilment of high indicators of turning to good account raw and subsidiary materials, continuing to expand the field of the synthesis and small-tonnage chemistry. In the field of wood processing, construction materials and light industry, stress is laid on diversifying the range of products, outstripping specific consumption, turning out new products with lighter weights and typified sizes.

Through its provisions, the plan ensures the increase of labour productivity in the Romanian industry by 5-6 per cent, of the degree of capitalization of raw and subsidiary materials, fuels and energy, including renewable and renewable sources, covering and rationalizing sources.

According to the plan, the activity of scientific research, technological development and introduction of technical progress will substantially contribute to implementing the programmes of intensive development, of improving organization and modernizing production processes, to better exploiting raw materials, uplifting the technical and qualitative level of production and reducing material and energy inputs. For attaining these objectives, the plan stipulates among others the improvement of the existing raw-material processing technologies and the devising of new updated ones, the assimilation of new, better materials, machines and equipment, the improvement of the typification, standardization and norm-setting activities. Finally, as is but natural, fundamental research will organically intertwine, from now on too, with the application one while the link between research, education and production will continue to be strengthened.

In 1988 the total volume of investments in the economy will top 88 billion lei. Investments will be primarily earmarked for implementing the updating and re-equipping programmes, also stipulated by a substantial cut in the share of construction works in the overall investments.

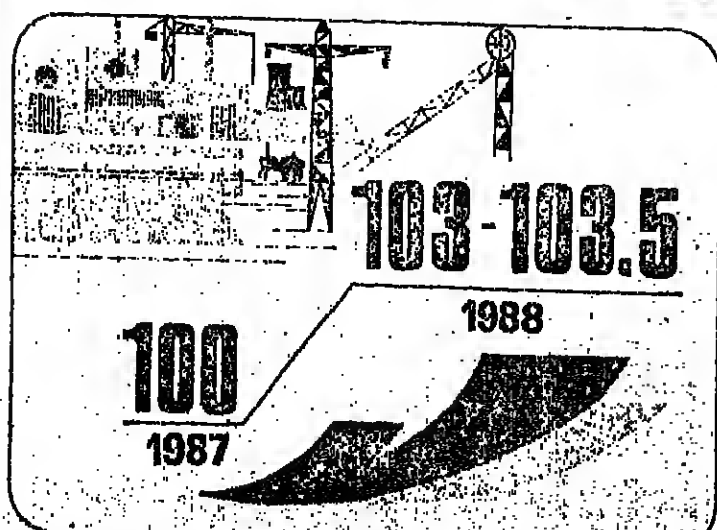
Thus, as far as industry is concerned, as in fact all branches of the national economy, the plan lays down the projects to be achieved within one year, the requisite financial, material and human means.



DYNAMICS OF THE INDUSTRIAL MARKETABLE PRODUCTION



New achievements of Romanian industry. Work is under way at the Bucharest Machine-Tool and Unit Enterprise on a series of programme-controlled lathes (top left). A new cotton knitting factory has recently gone on stream at Poniul (middle). Construction operations on a new section of the underground continue in Bucharest. Working apart from the zone between the future stations Bukur Ober and Stefan cel Mare (right).



FULFILMENT OF THE INVESTMENT PROGRAMME

AGRICULTURE

When in 1984 Romania obtained for the first time in its history a cereal harvest larger than 20 million tons, the production of a cereal harvest for every citizen was considered a great agricultural performance.

But, in the ensuing years - 1985, 1986 and 1987 - vastly larger productions were planned and harvested. Thus, in the last two years, in fairly favourable weather conditions, the cereal production has topped 30 million tons. Large crops have also been registered with fodder, technical plants, vegetables, fruit and grapes. At the same time the quantities of livestock products achieved in the field of animal breeding have increased.

Crops of eight or nine thousand kg of wheat or more than 20 t of maize per ha which five years ago were considered to touch the highest possible ceiling were reaped in the fields of 1986 and 1987 not from experimental plots but from scores of thousands of hectares. For such average productions obtained throughout the cultivated area, hundreds of farms received the high order of "Hero of the New Agrarian Revolution". The presence of such standard units in all counties proves again the great possibilities of today's Romanian agriculture.

Naturally, it would be an illusion to expect no plan provisions the figures calculated on the basis of these record outputs. However, their existence substantiates the provisions of the Law of the Plan of Development of Agriculture, Food Industry and Water Management for 1988.

The main indicators show first of all the consistency of the high growth rates of this branch.

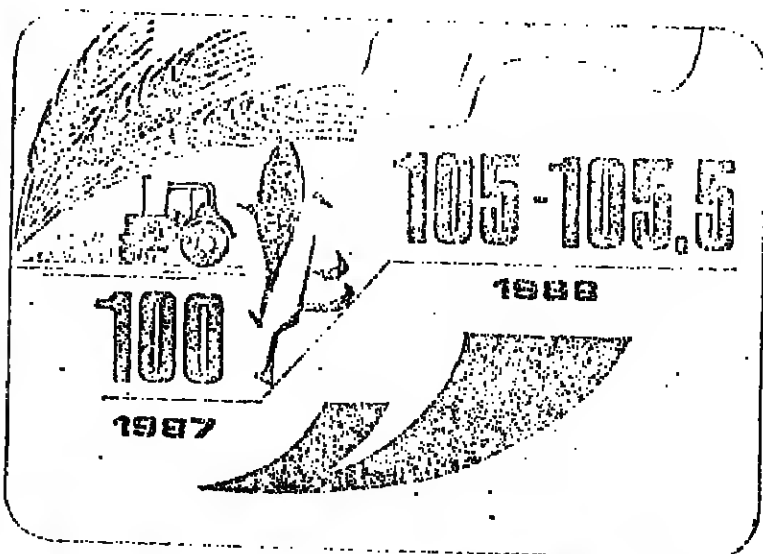
The overall farm output will increase this year by 8.5 per cent as against that of last year, the net production by 6-6.5 per cent, while the industrial goods production by 7.5-8 per cent, continuing that Romania continues to promote a highly dynamic agrarian policy.

The law not only prescribes plan figures but also substantiates them by indicating realistic solutions for the growth of farm outputs.

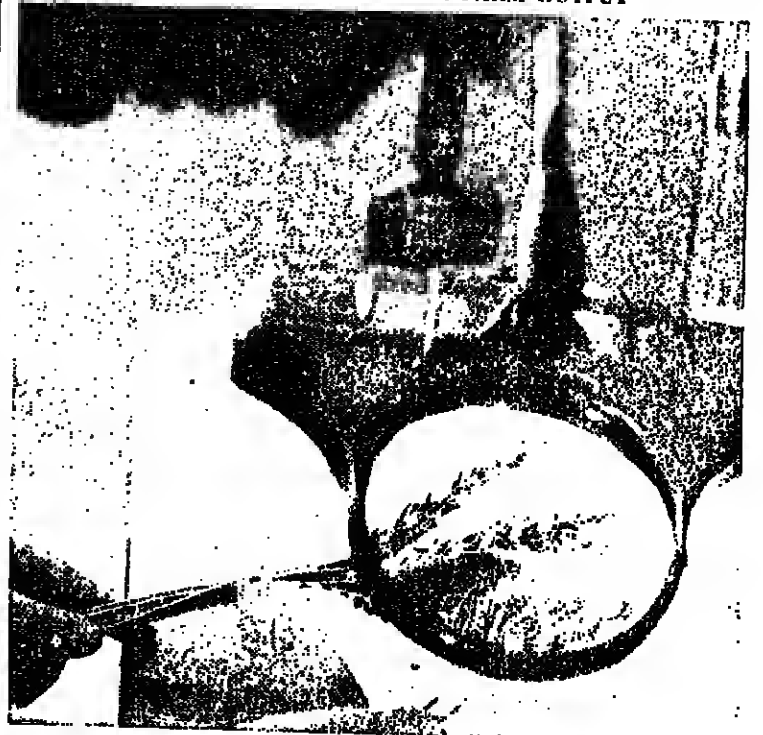
This year, too, stress is laid on the complete and intensive use of the land stock, on the recovery and reclamation of those areas which in the past were unjustifiably used for buildings and other non-farming purposes.

The law further calls for the introduction and expansion of the most productive varieties and hybrids, the use of seeds from superior biological categories, the strict observance of production techniques. Animal breeding has in view the improvement of reproduction, breeds, maturation, the growth of production in all farms where animals and poultry are raised.

Under the law scientific research is to contribute to the intensive development of Romanian agriculture, scientific institutes and stations are required to work out new technologies for restoring and enhancing the fertility of soils, especially of those eroded, sandy and salt-saturated, to create new high-yield strains of plants, more resistant to low temperatures, drought and other unfavourable environmental conditions, to improve genetically the animal breeds, to fully exploit on the existing fodder base, natural pastures and hayfields included. Finally, emphasis is placed on the technologies implying a low consumption of chemical substances with a view to reducing the polluting effects and conserving the qualities of the environment.



GROWTH OF THE GLOBAL FARM OUTPUT



SELF-MANAGEMENT

Aware of the fact that we cannot consume more than we produce, we intend to further increase the volume of farm goods and of industrial consumer goods. This principle is also observed by the Programme of self-management and self-supply for the assurance of the better supplying of the population in 1988, a programme that ensures the country's participation in the efforts for raising the outputs, of turning to good account all the resources available to us, are primarily viewed at.

According to the provisions of the Programme, even as compared to last year, a significant

growth is ensured in the deliveries of meat, meat products and cooked food, of fish, milk and milk products, vegetables, potatoes, fruits, etc. For instance, on average total consumption of 70 kg per capita and 15 kg of fish per capita is provided for.

The figures of the plan are of course, scientifically grounded, being correlated to the actual consumption needs. They are also up to the mark in the sense of an increase of consumption at a pace with the enlargement of the planned outputs.

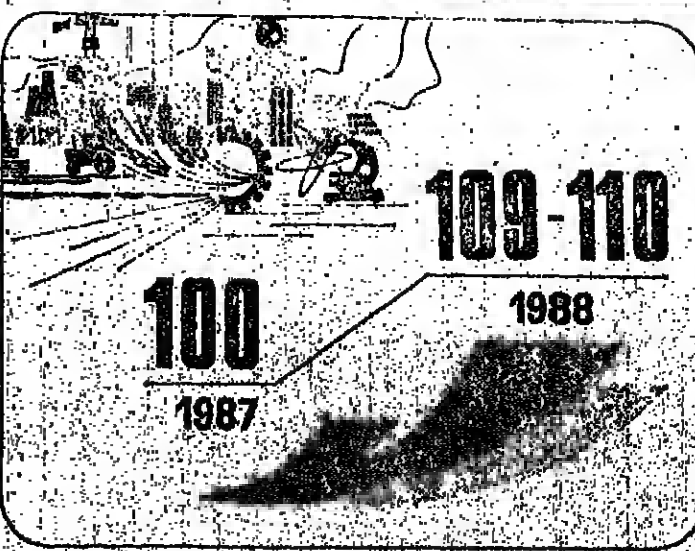
On the other hand, to the amounts of farm-food products distributed by the central state food are added those produced in the private households, where there are high numbers of fairs, pigs, cattle, sheep, etc.

As compared to last year, there will also be a growth in the industrial consumer goods, long-run ones, household appliances, etc., included, whose range will be diversified and whose technical-operational parameters will be raised.

A BALANCED BUDGET

Romania's 1988 state budget, adopted by the Grand National Assembly, comprises the state's centralized incomes and their earmarking in keeping with the targets of the Single National Plan. Expenditure for financing the national economy was set at 175,154.3 million lei, which accounts for some 41 per cent of total budgetary spending. Planned socio-cultural spending totals 69,833.3 million lei, that is, almost one-third more than the total allocated for the country's defence, which stands at 11,251.3 million lei.

Beyond the multitude of figures laid down in the document to which we are referring, it should be stressed that this year too Romania's budget will be perfectly balanced, both targeted for income and expenditure accounting to 433,987.7 million lei.



INCREASE OF THE NATIONAL INCOME

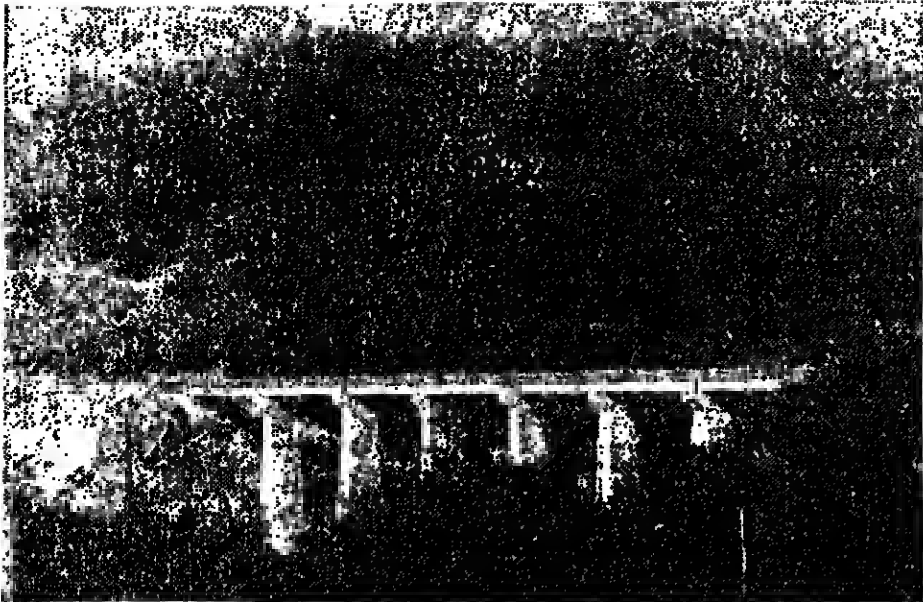
THE QUALITY OF LIFE

The fundamental purpose of the whole Romanian policy is the permanent raising of the material and cultural living standard of the people.

As we have already said, this year will see the beginning of the action of increasing the remunerations by 10 per cent. All the economic units, the central and local bodies are to take measures for the firm application of remuneration principles and distribution of the incomes of working people, in order to correlate incomes to the work performed, to apply the overall and direct earnings.

A large spectrum of measures devoted to raising the quality of life is included in the Programme regarding self-management and self-supply on territorial level.

The plan also provides for measures on the continuous improvement of health and social care, with a stress on preventing diseases. As a conclusion, let us mention - without going through all the provisions of the plan in this domain - that this year, 150,000 apartments will be commissioned, out of which 25 thousand in the country side.



A RAILROAD IN THE APUSENI MOUNTAINS

Recently, the Deva-Brad railroad has been commissioned, improving public and goods transport between the southern region of the Apuseni Mountains and other localities in the country. The railway covers now only 30 km, as compared to 215 km accom-

plish for the old, winding route. The building of this new railroad imposed the construction of 77 bridges, 10 viaducts, four tunnels. Two million cum of rock were excavated and almost half a million cum of concrete were cast.

MAMMOTH INSTALLATION

The enterprise of construction-assembly and mining equipment in Targu Jiu finished the work on the first turbo-external truck design for equipping bucket-wheel excavators used in coal quarries, with a capacity of 1,600 cum of mining mines excavated per hour. It reaches a height equal to

that of a block of flats, weighing 277 tons. It is the most complex product included so far in the production list of the young mining equipment enterprise of Gord county. It has a high technical and functional performance and a high reliability in exploitation.

LIGHT WEIGHT CONCRETES

Specialists of the Central Institute of Research, Design and Experiments in Construction — the Cluj-Napoca section have created new types of light weight concretes, obtained by including indigenous foams in the mortar mass. Their technico-economic characteristics make them even more useful, foam concretes successfully replacing aerated light weight concrete. They complete the range of thermally insulating materials preceding at the same time a series of advantages. The new technologies allow of obtaining the product directly from the specialized units.

The assimilation into fabrication of the new light weight concretes used as insulating materials for roofs and as thermo-insulating layers for perimeter walls in civil, industrial and agro-technical constructions leads to the considerable improvement of the thermal comfort.



● DAC 173 represents the latest achievement of Automobile Enterprises in Bucharest. Made in collaboration with the Turco-Turkey Transport Enterprise, the end user of the new transport means, it

corresponds to the demands of modern traffic. DAC 173 benefits by a blocking device for the motor axle giving it the possibility to start on ice, climb slopes in conditions of low adhesion.

A WORLD TRADE MARK

UNIARO is a mark well known in over 30 world countries. It belongs to the Mechanical Enterprises in Romania. New types of machine tools with superior technico-functional characteristics have been made here. Among them is the vertical lathe with a processing diameter of 1,600 mm. It has numerical control, and a driving plate ensuring a 60 percent productivity increase. The vertical lathe for various wheel processing, which was highly appreciated at the world exhibition in Milan, and the new special machine for roller thread cutting are two other novelties.

● Furniture items manufactured by the units of the wood-processing plant in Piatra Neamt are in increasingly high demand on foreign markets. At the end of last year, the specialists of the works designed new types of furniture for the collections of 1983, including period style bedrooms, the Ra bedroom, the Cora living room, as well as other types of small furniture. Another novelty: the wood-processing works have already turned out the first quadrille of plywood.

● Light industry novelties. This year, the specialist enterprises will turn out over 150,000 items and models to various prints and colours. Of them, 30,000 will be new. As regards the modernization of technologies, 23 new technologies will be introduced and another 175 will be generalized. These will equip production units under construction in Turcu Magurele, Iasi, Curtea de Arges, Birlad and Tulcea. Also, the knitwear and synthetics for enterprises in Vaslui will be completed. Currently Romanian light industry products are exported to over 70 countries on all continents.

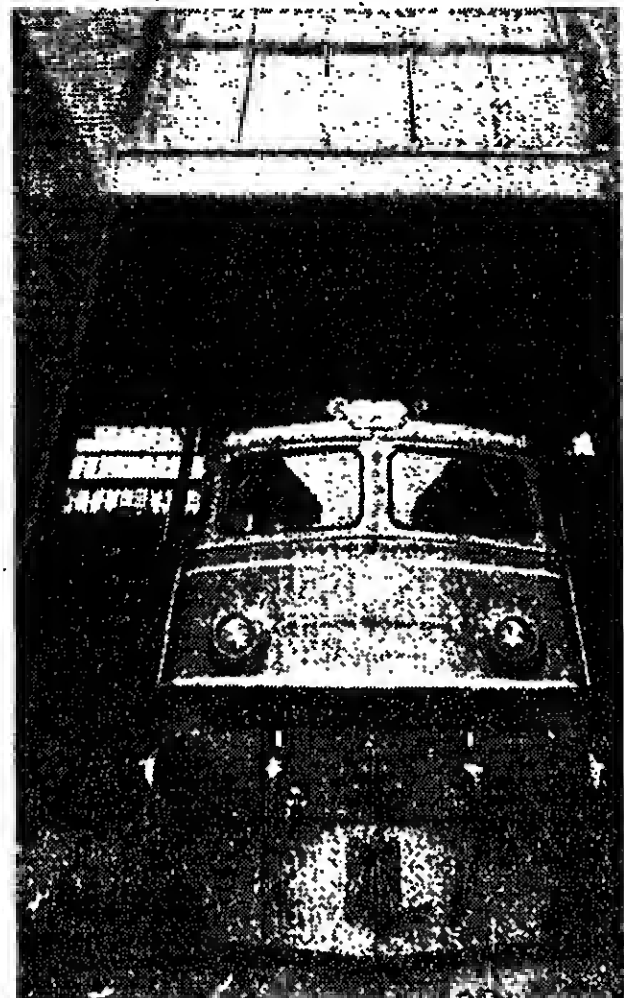
● The Terom synthetico fibre works in Iasi has homologated and assimilated a new product. We are referring to the copolyester fibre with phthalic anhydride, a product finalized on the basis of technologies worked out by specialists of the Iasi works. It is meant for the leather substitutes industry. The new fibre has a remarkable physical and mechanical properties.

3,500 ENGINES

The 2,100 hp Diesel-electric gathering locomotive is a novelty produced by the well-known Electropulver plant in Craiova. This type boasts performance ensuring its operation in various climate conditions.

In the 23 years which have elapsed since the construction of the first locomotive, the emblem Electropulver has been together on more than 3,500 electric and Diesel-electric engines of large capacities, executed in 12 types and variants. Approximately one third of them have been exported throughout the world.

At the beginning of 1983 the enterprise has introduced in the production line the first 2,100 hp Diesel-electric engine as part of its export programme, as well as the first Diesel-electric engines of the same capacity designed for foreign markets.



MEDALS, PRIZES, DIPLOMAS

Romanian architecture is hooked by a school with old-standing traditions. This affirmation is not new for the specialists. New are just the confirmations of the value of these specialists who make it up. The latest event of this genre was hosted by the Bulgarian city Sofia. The world architecture biennial — INTERARCH 82 — gathered designs of 387 architects from 37 countries. A competent specialist committee, analyzed the relations between new elements, functionally, originally and symbolically of buildings materials — and awarded several important distinctions.

Among the works enjoying unanimous appreciation was one signed by architect Barbu Popescu and Stefan Borila, the former associate-professor, the latter assistant professor at "Ion Minu" Architecture Institute in Bucharest. Their design for the House of Sciences and Technique for Youth in Sladina (Gor county), inaugurated a short time before the competition — was awarded the silver medal, the special prize and diploma of honor.

The two architects are in Romania, among the best known creators in the field of constructions for the younger generation. In their 17 years of work they designed, among others, the Culture and Education

Complex for Youth in Galati which was awarded in 1980 the Prize of the Romanian Architects' Union, the House of Youth in Targu Jiu, Student Park in Bucharest, a design which also received a prize of the Architects' Union. Other designs by the Romanian architects are under construction: the Recreation Complex, in Targu Jiu; the Youth House in Giurgiu; the Youth Complex, in Mehadia and the Recreation one in Hancea (Arges county). In Sofia, at the mentioned biennial, within the design section, another Romanian architect, Florin Blidescu from the Research Apparatus and Equipment Enterprise in Iasi-Bucharest — won the third prize with the work "At the Same Time in the Same Place". The design logically and efficiently emphasizes a series of architectural modules. Florin Blidescu did not participate in an international competition for the first time. At the previous edition of the event he obtained two valuable distinctions: the silver medal and the Special Prize of the House of Youth for the achievement of a design and a bronze medal for the design section.

M. CONSTANTIN

LIFE AS PROFIT

"It wouldn't be possible otherwise. What would be the meaning of our work if we didn't succeed in taking from time a real physical profit. Day by day, year by year. Parity, we make our life more beautiful with this profit."

These are the words of a 35-year old mayor, Livia Oprisescu, who manages the public affairs of Periam commune (Timis county). She was elected mayor in 1978. But until then her way had been strewn with hardships. In 1968 she was an apprentice at an artisan's unit. Then she attended a vocational school to

study. It is very important — Livia Oprisescu said — to rely on ourselves during one's teens. As the professional activity in Periam shows, 80 per cent of the inhabitants and labour force is female, adequate jobs are being created. On the mayor's agenda there are projects for the modernization of agriculture. The producer cooperative farm is one of the best units in this county. Bumper crops are harvested from large areas. About 5,000 ha. Tree-growing — the Periam peaches are famous — covers over 600 ha. A few years ago, the farmers gathered under 2,000 kg per ha of wheat, barley, corn, 800 kg of sunflower, soybean and beans, about 13,000 kg per ha of sugar beet. Thanks to the use of some new high-yield breeds and hybrid, "Levin-34", "Fandulescu-28", "Libelula", for wheat, "Sena", for corn, "Alina" for barley, for re-arranging the sowing and introduced the 3-year crop-rotation and also thanks to the collaboration of the specialists at the Lovrin Agricultural Research Station and those of the research base of the Institute of Chemistry in Cluj-Napoca, better and better results have been scored. Last year, 6,100 kg of wheat, 2,300 kg of barley, over 23,400 kg of corn cobs, over 3,300 kg of soy bean, 3,800 kg of sunflower, 2,300 kg of beans and over 51,000 kg of sugar beet per ha were obtained. For their results, the farmers in Periam were awarded the "Agrarian Merit" order third class in 1980, and several classes in 1981 and 1982. For the above mentioned wheat and barley outputs they were awarded the "Hero of the New Agrarian Revolution" title in 1982. We expect to receive the same distinction — mayor Livia Oprisescu told me — for several outstanding results scored this year.

M. CONSTANTINESCU

● Compared to 1965 the amounts allotted per capita from the state budget for health care have increased more than three times.

● While in 1965 the number of physicians was of 27,900 today it surpasses 48,000. In Romania, a physician takes care of 475 inhabitants. This is a ratio registered by a small number of countries in the world.

● In 1986 the hospitals had a total number of 204,200 beds. Last year new hospitals were built in Simleu Silvaniei, Calafat, Orăştie, Răşinari de

Vede. Other localities will soon enrich their dowry with hospitals or hospitals and polyclinics: Daroi, Adjud, Rovinari, Negreşti-Oaş, Beclan and Giurgiu.

● There are over 1,500 enterprise dispensaries and 3,900 territorial dispensaries (rural or urban) in the whole country.

● Health care is free of charge for all children in Romania. Bonuses granted to mothers who gave birth to more than one child have grown from 1,000 to 1,500 lei.

FRAILTY AND VIGOUR

The girl's name is Luminia Nicolae and she works at the Institute of Tree-Growing in Mărculeşti (Arges county). Attracted by these forms of the living matter — plants, trees, flowers — Luminia became after graduating from high-school, a rigorous laboratory assistant at the above mentioned institute. After a short period of hesitation, Luminia expressed her wish to attend the evening classes of the Biology Faculty. She finished the high-school in 1978. After a short period of hesitation, Luminia expressed her wish to attend the evening classes of the Biology Faculty. She finished the high-school in 1978. After a short period of hesitation, Luminia expressed her wish to attend the evening classes of the Biology Faculty. She finished the high-school in 1978.

But Luminia still felt that her deadlocks had not yet been broken. So then, after the necessary demerches, she went to the University in Cluj-Napoca, she passed some exams and added another two years to her studies. She got her biological title not long ago. And not as a mere formality. During her learning years, Luminia Nicolae did not cease to work. Patiently, obstinately, even "rebelliously" — as she herself admits. But her perseverance was rewarded. After six weeks, from the jelly-like matter at the bottom of the test tube, there springs a thin, thread-like root. With a lot of precaution, it is then transplanted to the greenhouse. There follow some other weeks of waiting, of observations put down in detail. And then, the much looked forward to wonder comes out: the sprout (the tip of the plant) not only appears, but 30-40 sprouts appear, as fresh as healthy. The rapid, pose of multiplication on a small surface in just one of the benefits of plant tissue culture. The absolute health, from the very beginning, is undoubtedly the most precious conquest of the researcher.

Biologist Luminia Nicolae trusted us with a secret: in the fridge (not the one for a house, but the one for the laboratory) there is a small surface in just one of the benefits of plant tissue culture. The absolute health, from the very beginning, is undoubtedly the most precious conquest of the researcher. Biologist Luminia Nicolae trusted us with a secret: in the fridge (not the one for a house, but the one for the laboratory) there is a small surface in just one of the benefits of plant tissue culture. The absolute health, from the very beginning, is undoubtedly the most precious conquest of the researcher.

And. The went to Timisoara, where she graduated from high school, the evening classes. Today she is an extra-mural student of an economic faculty in Bucharest. The position of mayor in Periam — she said — was an exam of political maturity for her.

Periam was not a poor commune. But, at the time she came here it was not a highly developed one either. There were small timber, brick, hair and cane factories. Today, the industry of that place looks quite different. In 1978 a new section of the hair enterprise "Colorit" specialized in doing products was established, blacks underlining the architectural profile of the commune were built. The comfortable apartments on the whole. You might wonder why so few of them were built. More than that, or just the necessities of the local area. Everything that is done there reflects an overall plan from a social point of view. A building, including several shops, a post office and other social services units, was also built. Right in the middle of the town.

The settlement has 5,000 inhabitants. There are two dispensaries. Two general schools, an agro-industrial, biological, where, under the supervision of specialists the future technicians of the agricultural sector



gained. The story of that wealth can be reconstructed out of numerous details, out of seconds, hours, days and years of infatigable minutes. In the beginning, there was a tender, green bit, whose details could be seen with the naked eye. The vegetal fragment is rigorously sterilized, no virus, no pathogenic agent can touch it. The cell being anorectic, as evolution passes through a test tube or a balloon where the "chick" is fed with all the substances it needs. After six weeks, from the jelly-like matter at the bottom of the test tube, there springs a thin, thread-like root. With a lot of precaution, it is then transplanted to the greenhouse. There follow some other weeks of waiting, of observations put down in detail. And then, the much looked forward to wonder comes out: the sprout (the tip of the plant) not only appears, but 30-40 sprouts appear, as fresh as healthy. The rapid, pose of multiplication on a small surface in just one of the benefits of plant tissue culture. The absolute health, from the very beginning, is undoubtedly the most precious conquest of the researcher.

V. COSTA

THE BLUE-EYED FAMILY

In the spring of 1979 a young couple, gripped by the breathless intensity of their emotions, uttered on outright and solemn I do at the ceremony held in the Wedding House. Therefore, a new family was set up: Alexandru and Constanta Năstase. The moment — always unique for the newly-weds but quite ordinary in the eyes of witnesses — seemed to have no significant consequence for the young couple either...

THE CONTINUER OF A NAME

Alexandru Năstase, a graduate from the Electronics High School worked (and is still working, now boasting 17 years

wish. On February 18, 1986, they had their first child — Răzvan Alexandru, a beautiful and robust new-born baby who was to carry on the name of Năstase. From the earliest weeks, the boy had become "the most intelligent, agile baby with the bluest eyes in the world. Hardly had he reached the age of



WHOM DOES IONUȚ TAKE AFTER?

The girl grew fast, the boy too, having on occasion of two years over his sister. It was time for Răzvan Alexandru to attend the district kindergarten no. 20. Ana Maria followed suit. In 1983, 1984 and 1985 passed in an atmosphere of harmonious

other baby boy, Mihai-Ionuț added his identity to the name of Năstase: Mihai-Ionuț was born. The increasingly more distinct features betrayed a close resemblance with his father (in this family, contrary to frequent oases, boys take after their father, while the girls reproduce visibly their mother's image). Ionuț was an exception to the physiognomy characteristics of his family due to a slight detail: he had black eyes.

23,000,000

In the evening of December 3, 1987, in an apartment at 4 Agreia Alley in Bucharest, everyone was in an unusual state of agitation. The elder children (one of eight, the other of five years and a half) were sent to bed, while Ionuț was entrusted to his grandmother.

When the clock struck 0.01, marking the day of December 3, 1987, the white hall of the Municipal Hospital reverberated — surprisingly early even for the experienced medical staff — with the triumphant shriek of a baby announcing his entrance into the world.

In the morning of the same day, Dr. Radu Bontescu visited the young mother, congratulating her with an exuberance which he felt to be normal for the occasion: "You have a famous girl!" The girl's name was Elena-Ioana. It was established beforehand by her father who was sure it was going to be a daughter in order to make up the second pair.

At the entrance of radio and television stations, the

xendru Năstase was welcomed by his colleagues with obseques which he thought were only normal, though they seemed to exceed the frame of usual congratulations offered upon the birth of a new child. He had not feared yet the thrilling piece of news: the National Commission of Demography had already announced early in the morning of December 3 that a baby called Elena Ioana Năstase rounded off the number of Romania's inhabitants, now amounting to 23 millions. Cablegrams had been sent throughout the country spreading the date of the event; Romanian broadcasting stations and dailies announced the victorious piece of news with justified haste. Soviet reporters and photographers managed to break all medical rules, filling every news stand with images of the mother and the baby girl who had become overnight Miss Romania of 1987.

The birth of Elena Ioana Năstase was an ordinary event for all the Romanian days and nights. But the piece of news became famous, enjoying the effective support of a whole nation, because the girl number 23,000,000 has a deep significance for the continuously growing human dower of the country.

Now Elena Ioana Năstase has joined her elder brothers and sister. She grows by 200 grams a week! She smiles in her sleep and her smile can be read in her blue eyes when she wakes up. The joy of a whole country, her birth was a great event for the Năstase family.

VICTORIA CIOREAGIU

OPENHEARTED

The inorganic chemistry lab of the specialist faculty at East University is never empty. There you can certainly find Magda Petrovici with the students but, also alone, following a complicated research theme with great implications.

Professor doctor Magda Petrovici is a member of the French chemical society, of the

Balkan Medical Academy and of other international scientific organizations. Last year she held specialized conferences in West Germany and France, participated in prestigious international chemistry congresses. Her lectures were praised by paragonists in the field.

"I have the greatest satisfaction when my students appreciate my lectures," told the distinguished professor. In fact, what I presented them over the years lies at the base of the first printed course of the History of World and Romanian Chemistry.

Last spring prof. dr. Magda Petrovici participated in the National Colloquium of Student Scientific Clubs and was elected. Beyond the papers, high scientific level, their original opinions, her students proved that they had adopted an open heart to their professor's advice. She must be intelligent, but also a philosopher and cultured one. They must be intelligent. Only passion for beauty of truth can lead to genuine human values.

Such an ideal, for which she has unhesitatingly pleaded during her entire brilliant academic career, made her become a member of the Romanian National Committee "Scientists and Educators" Reserve (the reserve of people who can be called upon in case of need).

CONSTANTIN LUPU



of uninterrupted service) at the enterprise of radio parts and semiconductor in Bucharest. He and his wife had been colleagues of the same enterprise, until...

Alexandru was the only child of a widow (he could hardly remember his father when he died of an untimely death). In his childhood, and in all the years before his marriage, Alexandru had always wished to have at least a brother or a sister... For her part, Constanta had three brothers and two sisters (while her grandparents had had no less than 11 offspring).

Therefore, it is easy to presume that the new family of Năstase aspired after fulfilling its duty: apparently different, the

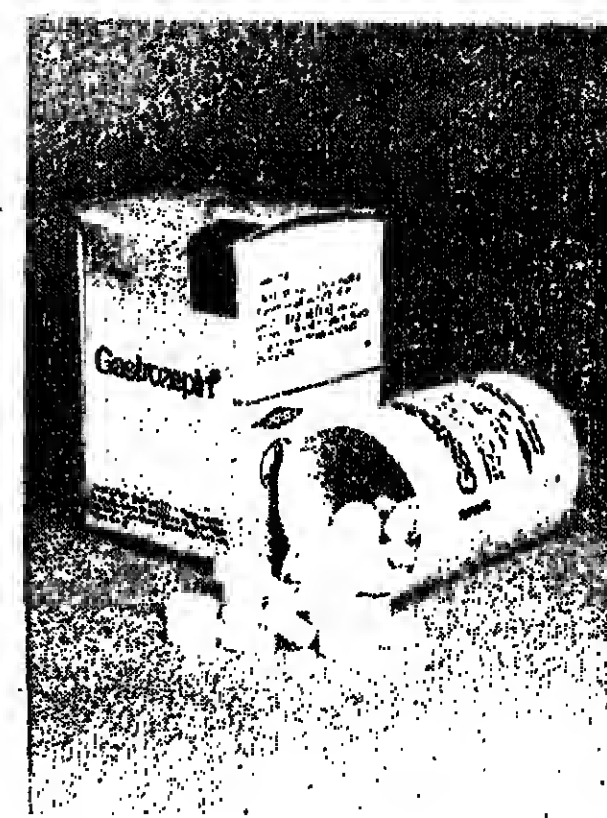
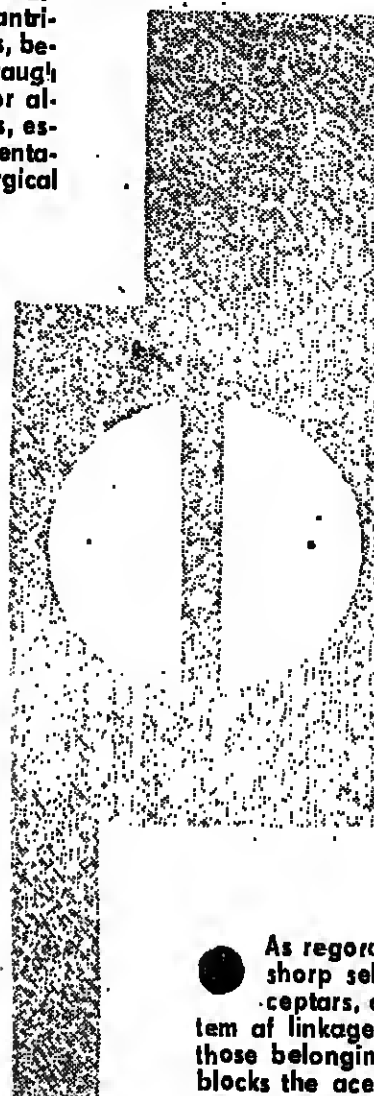
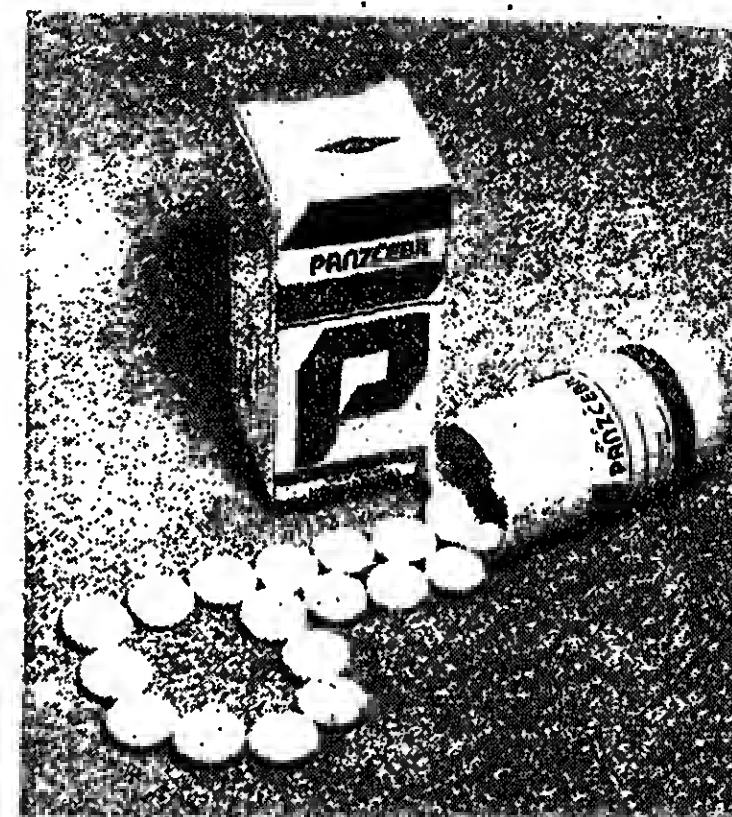
one year when his parents began to feel sorry for having only one child.

THE YOUNGEST CHILD A BABY GIRL

The regret persisted, overtly declared or not, somehow overshadowing the joy of the Năstase family to have a son who feasted, staggered about and then walked firmly through the house. But on September 18, 1986, fate smiled: another little girl, Elena-Ioana, was born. The world — Ana Maria Năstase, a charming doll and smiling girl, the youngest child, rounded off the family, as much desired by Alexandru and Constanta.

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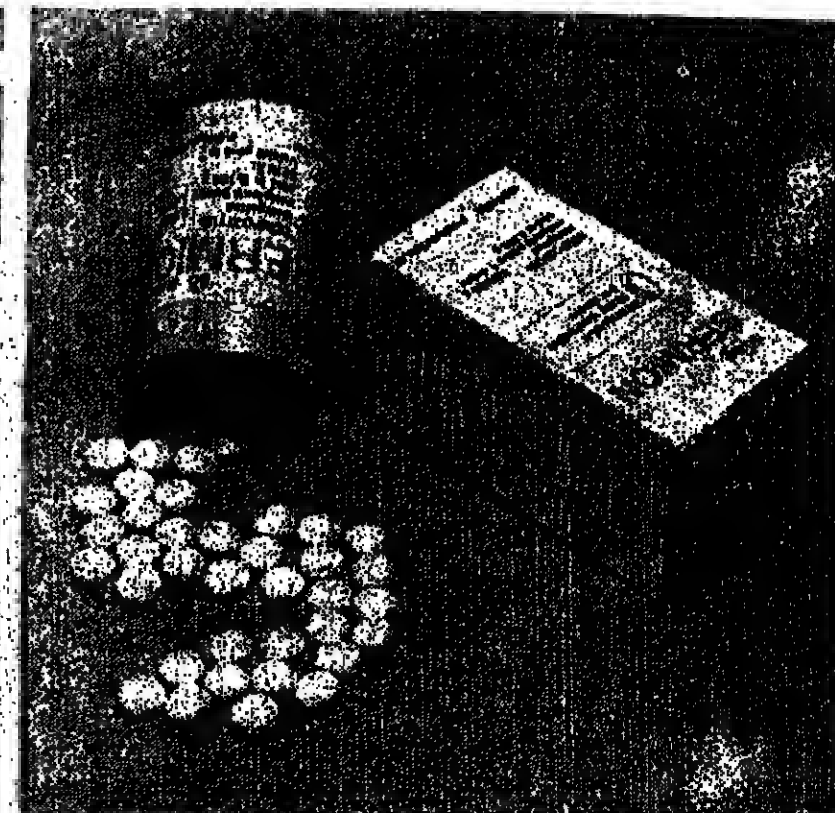
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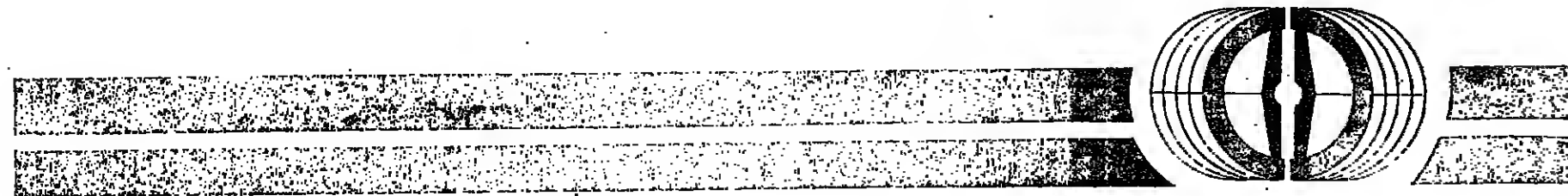


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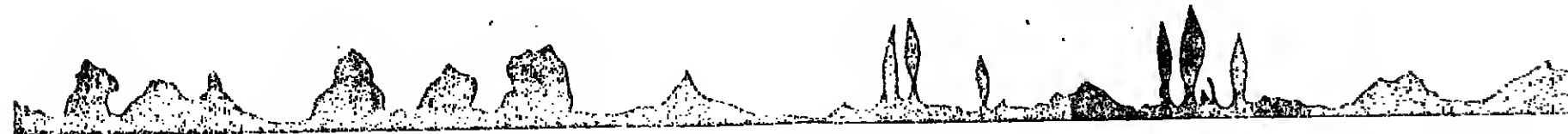
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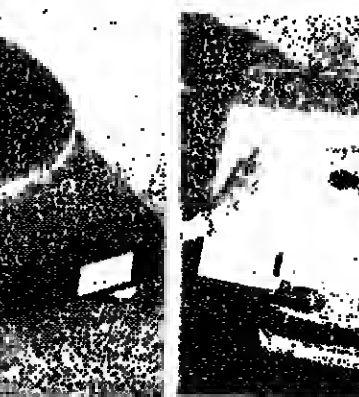
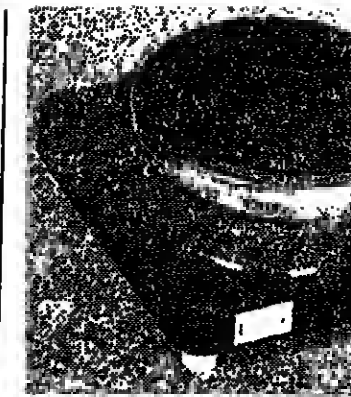
or amplifier of the monophonic or stereophonic audio programmes.
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ed. Fabrics can be sprayed before ironing by means of a spray nozzle.

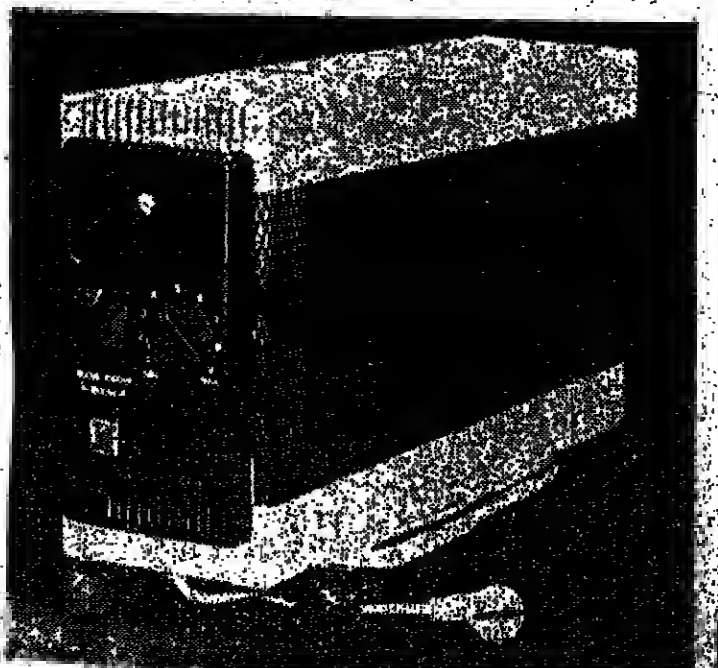
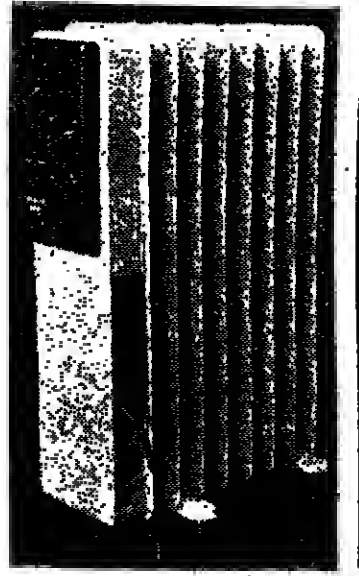
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